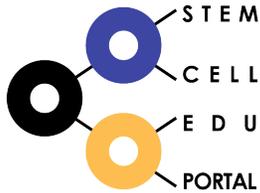


## Unit 2: Appendix E – Research Project Instructions

### Regenerative medicine and clinical trials research project

- Choose one disease or condition from the list
  - o If you have one in mind that is not on the list, have it approved by your teacher
  - o Most diseases on this list should have treatments using stem cell therapies – if yours does not, please see your teacher and we'll discuss other options.
- Research the disease
  - o What systems are affected?
  - o How does it affect the body?
  - o How many people in the US and/or world are affected with this disease?
- Briefly discuss the normal function of the healthy system(s) – what are the tissues, organs, cells involved and how do they work?
- Research the best treatment(s) for this disease that are being used now, a.k.a. the “Gold Standard.” The answer may be nothing. For some diseases there may be combination treatments, like for breast cancer, which includes chemotherapy and tamoxifen (or other cancer drug).
- Go to **Clinicaltrials.gov** and search your disease and “stem cell” or use other identifiers that will assist you in finding current trials, in which qualified patients could enroll, that test the effectiveness and safety of new therapies using stem cells or products made from stem cells. Keep in mind that regenerative medicine includes drugs that affect stem cell function; for example, “Colony-Stimulating Factor” causes proliferation and differentiation (a possible therapy) in immune progenitor cells. Drugs affecting stem cell function can be included in your report.
- Fill in the forms for at least 2 (College Prep) or 3 (Honors) trials (one extra at either level will receive extra credit BUT ONLY 1). Only include trials that are active, in search of volunteers, or completed – DO NOT include any that have been terminated.
- In your PowerPoint you will be presenting
  - o The disease or condition (see research above)
  - o The main affected system's normal function (and what happens during the disease, called the pathological function)



- The best treatment(s) currently available, in other words – the “Gold Standard”
  - Briefly paraphrase your stem cell therapy explaining the purpose, procedure, status, and phase of the trial(s). Make sure to include how stem cells are involved; if you can find the information, add in which type of stem cells are being used—adult, embryonic, induced pluripotent, progenitor cells, etc.
- Turn in
- The research form
  - An I-search
  - Keep a log of your actions, thoughts, and feelings as you move through the research process. This log also needs to include what websites you searched – the start to your bibliography.